Date: Thu, 29 Jul 93 11:45:12 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #917
To: Info-Hams

Info-Hams Digest Thu, 29 Jul 93 Volume 93 : Issue 917

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

Date: 28 Jul 93 13:21:00 GMT
From: btree!network.ucsd.edu!news-mail-gateway@network.ucsd.edu
Subject: -.-. .-- -. . .-- ...
To: info-hams@ucsd.edu

E L E C T R O N I C M A I L
(DDN Host Address: V3.HANSCOM.AF.MIL)

Date: 28-Jul-1993 08:21
From: Capt William Szarek
Username: SZAREKW

Dept: ESC/XRR
Tel No:

TO: _WINS% (_DDN[INFO-HAMS@UCSD.EDU])

Subject: -.-. .-- -. . .-- ...

--- -.- . ...- . .-. -.-- -... --- -.. -.--
.-.. . - ... ..-. --- .-. -- --- ..- .-. --- .-- .-
.- . .-- ... --. .-. --- ..- .-.. .-.-.-

--- -. .-.. -.-- -.-. .-- .-- --- ..- .-.. -.. -... .
.- .-.. --- ..- -.. .-.-.-

.-- .. - .... .- .-. . --.- ..- .. .-. . -- . -. - .-.. .. -.- .
- .... .- - .-- . .-- --- ..- .-.. -.. .... .- ...- . -. ---
.-.. .-. --- -... .-.. . -- ... .-- .. - ....
..-. .-.. .- -- . .-. ... --- .-. -.-. .-. -.-- -... .- -... .. . ...
.-.-.-

.-- ..- ... - .- -. .. -.. . .- .-.-.- :-)

-.. . .-- -- .---- .-- ...-.- ..

Date: Mon, 26 Jul 93 21:10:50 MST
From: usc!cs.utexas.edu!asuvax!ennews!stat!david@network.ucsd.edu
Subject: 20/20 and ham radio
To: info-hams@ucsd.edu

Mike_Beezley.houstoncssc@xerox.COM writes:

> >> I had to work pretty hard to discern the back end of a tribander in one
> of the outdoor shots <<
> You were sharper eyed than I. I musta blinked when that scenee was on
;-)

There is no tribander ... a bunch of monobanders on a rotatable tower.
I used to operate k7uga/wa7uga/afc6bg when Barry's station was still in
the MARS program ... I could generate some good pileups with the WA7UGA
call ...

david

Internet: david@stat.com FAX: +1 (602) 451-6135
Bitnet: ATW1H@ASUACAD FidoNet=> 1:114/15
Amateur Packet ax25: wb7tpy@wb7tpy.az.usa.na

Date: 26 Jul 1993 02:34:08 GMT
From: news!sun1.clark.net!andy@uunet.uu.net
Subject: Alinco DJ580T woes and MCF...
To: info-hams@ucsd.edu

charles he hemstreet (hemstree@cs.colostate.edu) wrote:

: Helpful hint: Go gentle on the antenna bnc. I use an AEA Hot-rod for
: two meters, a Diamond RH-77ca for handi-dual-banding, and a magmount
: for mobiling around. The connector wasn't all that solid on my radio
: but my changing of antennas (three or four times a day) was what killed
: the internal antenna connections.

My DJ580's BNC connector loosened up within one day after purchase, plus, its internal solder joint came undone. After resoldering the connection and re-assembling the case, I placed a ring of Super Glue around the connector. It's not going anywhere now, regardless how many times I switch antennas.

: Now the MCF function... has anyone seen this in the newer Alinco's?
: Is there a mod that can be performed to get my radio to function with
: this new VHF-VHF, VHF-UHF, UHF-UHF function?

My Alinco is only a few weeks old, and I haven't heard about this MCF function. Anyone got a clue?

Date: 26 Jul 1993 02:12:04 GMT
From: news.acns.nwu.edu!math.ohio-state.edu!uwm.edu!csd4.csd.uwm.edu!
pachner@network.ucsd.edu
Subject: Does ICOM P2AT transmit out of band for C.A.P.
To: info-hams@ucsd.edu

My Dad was looking at the ICOM P2AT for use in Civil Air Patrol. Does this unit transmit out of ham bands, or is there a mod availabe?

--
Thomas Jay Pachner -=- Music Major, Bassist, Gamer, and Amateur Operator
University of Wisconsin - Milwaukee - pachner@csd4.csd.uwm.edu

Appreciator of all kinds of true music (sorry rap and country)
Amateur Call Sign: waiting since July 10 (it's worse than tax returns)

Date: Mon, 26 Jul 93 17:14:02 -0800
From: sdd.hp.com!vixen.cso.uiuc.edu!howland.reston.ans.net!usc!cs.utexas.edu!
asuvax!chnews!ornews.intel.com!littlei.intel.com@network.ucsd.edu
Subject: FT-5100 fan turn on temperature
To: info-hams@ucsd.edu

Recently someone posted information on how to adjust the turn on
temperature for the fan on a Yaesu FT-5100. Now that I have a FT-5100,
I can't find the copy of the info. that I am sure I saved. :-)

If someone has this info. and can send it to me I would be grateful.
I'll pass it on to Brian McMinn who will add it to his mods list which he
posts to this news group.

Thanks in advance.

Thomas (Griff) Griffin, N7ZKL
griff@littlei.intel.com Internet
n7zkl@k7iqi.or.usa.na   Packet

Date: Thu, 29 Jul 93 00:01:00 GMT
From: ncrgw2.ncr.com!ncrhub2!torynews!kevin@uunet.uu.net
Subject: How many people actually use paddles ?
To: info-hams@ucsd.edu

In article <9307281844.AA19646@opus.xyplex.com> sasminkey@eng.xyplex.com writes:
>Will Turner N0RDV recently said...
>
>I'll finish with my standard advice and opinion: these days, there is no reason
>to use anything but an iambic paddle and a keyer for CW. This combination gives
>the average ham the best ability to send excellent code. It's a rare op that
>really can send excellent code with a straight key and an especially rare op
>that really knows how to properly adjust and properly use a bug.
>
I started out with a straight key only, then went to an iambic paddle from
there. I have since been going back to the straight key periodically, because
I enjoy it. I have found that using an iambic paddle ruins my fist on the
straight key, at least temporarily. With an iambic paddle you can be quite
sloppy and still have the code come out perfect (within limits of course).

Any sloppiness at the straight key will be audible. I usually have to
put away the iambic paddle and use only the straight key for a while, just
to get back to the quality of fist I had before.

My latest acquisition is a Vibroplex "Original" bug. These have got to be
the most difficult method of sending code ever devised ;-) Your speed must
be matched to the resonant frequency of the shaft, and this seems to be too
fast no matter what I do. So I guess I'll just have to learn 30wpm to use it.

Currently floating somewhere between 20 and 30 wpm...

--
[] [] [][]   [][]   Kevin Sanders, KN6FQ   NCR Torrey Pines
[] []   [] [] []   kevin.sanders@torreypinesca.ncr.com   (619) 597-3602
[][]   [][]   [][]   kevin%beacons@cyber.net
[] []   [] []   []
[] [] [] [] [][]   Dump MS-DOS.   Prevent Programmer Burnout with Linux.

Date: 28 Jul 93 12:36:43 GMT
From: btree!network.ucsd.edu!news-mail-gateway@network.ucsd.edu
Subject: IC-22U/PL Boards
To: info-hams@ucsd.edu

Hi All,

I asked this once about six months ago, but the print out that had
the answer. I remember a K4 at KSC answering.

Who has put a Comm Spec PL board into an Icom 22U (Uniform version not
Sierra), which one of the CS boards did you use, and how did you do it
(promise not to lose the print out this time)?

jd

Date: 29 Jul 1993 00:33:29 -0400
From: vtserf.cc.vt.edu!csugrad.cs.vt.edu!not-for-mail@uunet.uu.net
Subject: Info wanted on Kenwood TM-241-A
To: info-hams@ucsd.edu

I'm getting a Kenwood TM-241A and a RC-20 in the next few days.
I was wondering if there were any mods or any such info I
could use on the radio? Anything?

Joe Reid

call sign impending... 2 weeks and counting :-)

--
Joe Reid
jreid@csugrad.cs.vt.edu jreid@gnu.ai.mit.edu
rri!jreid@vtserf.cc.vt.edu vpcjoe@vtcs1.cs.vt.edu
UNIX Systems Administrator, pool player, and professional do-nothing

---

Date: 28 Jul 93 11:28:38 GMT
From: btree!network.ucsd.edu!news-mail-gateway@network.ucsd.edu
Subject: S meters and modern technology
To: info-hams@ucsd.edu

Gary, KE4ZV wrote:

>My fuzzy memory says Collins introduced the S scale in the late 1930s or
>early 1940s. The scale originally topped out at S9, the +db part was added

I sorta suspected it was back in that time frame somewhere!

>later. That's because 50 uV was considered a very strong signal in those
>days when most hams were running 100 watts plate *input* power, or less.
>Only a very few wealthy hams had higher power equipment. The scale then
>descended in 6 db steps to S0, a signal inaudible on most receivers of the
>day due to internal receiver noise. The S scale was intended to be a more

Practical too, I'd say!

>objective replacement for the old S in RST. Even in those days, DXers

Yup, and it fits the reporting system in vogue. Now it comes together
and even makes good sense. But, with the stuff we have available today
does it still do justice, or does it matter at all, I wonder? I'd
rather see some kind of indicator that did a more accurate job, but we've
got what we've got I suppose.

>all gave 599 reports if they needed the card.

Not much change here huh?

>It was common amateur practice in those days to deal with signal levels
>in microvolts rather than the more exotic dbm. Since 50 uV was a nice

Well, makes sense too! If we had indicators that were at least reasonable
it sure would tell someone more meaningful info, don't you think? I mean
telling a guy he's 67uv tells him exactly what strength he is. S9+10-15

may not! But then again, if the Smeter was accurate it'd be conveying
the same thing I guess.

>round number, and easily generated and measured with the equipment of
>the day, it was chosen rather than 45 or 63 or some other odd number
>as the reference level. Collins equipment of the era was accurately
>calibrated to this reference level(+/- 3%). Most radios of the era
>that were bandswitched, many were single band, did so by physically
>plugging coils or entire modules in for each band. Some even had plug
>in tuning scales. Whether it was intended for there to be plug in
>calibration modules for each band or not, I don't know. I've never
>seen one.

>Gary

Interesting stuff Gary! Brings back some memories too.

My first transmitter was homebrewed, using a single 6V6GT, I think it
was, and plug-in coils for 40 & 75; about 6W out. When I could afford
it the move up to the Ranger I and I was in hog heaven when I passed
the general and advanced! 45W out on 10 on AM! And it even had a VFO!

73
Paul
WB2OYC
ar..

Date: 27 Jul 93 23:24:31 GMT
From: gatech!howland.reston.ans.net!vixen.cso.uiuc.edu!uwm.edu!cs.utexas.edu!
swrinde!network.ucsd.edu!news-mail-gateway@RUTGERS.EDU
Subject: S meters and modern technology
To: info-hams@ucsd.edu

S Meters and Modern Technology

>Professional color camera systems have a similar problem. They have to

>maintain a given gain response under all environmental and aging

>conditions in each channel in order to maintain proper colormetry.

>That's done by taking an attenuated reference signal and injecting it into

>the preamps and adjusting the system gains so that the signals come out of

>the RGB channels at the proper amplitude. This CAL pulse is similar in
>concept to the frequency calibration markers in use in radios, except it's
>an amplitude reference rather than a frequency reference.

>It should be relatively simple to implement a log stepped amplitude
>reference in a radio and have the radio automatically insert and
>measure this reference at each band change, or power up. That would
>give it a self calibration check that would compensate automatically
>for variations in stage gain.

>Gary

That sounds pretty workable to me!

And Kevin had this idea that also sounds quite reasonable, not to
mention do-able.

>One simple way of calibrating rigs would be to use a marker generator
>that generates a very fast pulse (a few nS from a 74F00 or a schottky
>diode) at say 1Mhz rep-rate (just the old crystal calibrator with a
>fast switch). By using a very short pulse you will get almost equal
>contributions in all the harmonics (remeber your Fourier transform
>theory?) so there are no problems calibrating the frequency response of
>the reference oscillator. Then add a switchable attenuator (wouldn't

>need many levels perhaps even a PIN diode attenuator controlled by a
>DAC) and some software. Just a SMOP :-)

Notice how close the two ideas are in concept!

>Question to the person who said that the IARU region one has a standard
>5.6dB S unit. Why 5.6dB? Why not just define S9 as 50uV in 50 ohms

No one said the IARU said; you mixed up a couple of separate statements there. I'm the one that said 5.6db per, assuming nine full steps. The IARU suggested, as stated by David Newkirk, exactly what you said! Which makes the step a full 6db per. But then the question becomes how many db are there between S-whatever and S1? As you say, the equipment we have available today, provides a good deal more usuable sensitivity down in this range. If the radio's noise floor was -138dbm, that would mean the first full step (the ninth) could represent as much as 17db! A signal could be as much as 17db stronger than the noise floor of the radio, and be just an S1!

All of this just supports the dubious nature of the beast, doesn't it?

And this is another reason why the dbuv scale just makes so much good sense! It doesn't suffer from this problem of interpretation at all! .1uv (-128dbm) is -20db on this scale, not somewhere between S-whatever

and S1!

>(-73dBm) and left S1 be 48dB less (there are 8 6dB steps from s9 to s1)
>at -121dBm. This is also strange given the noise floorin most RXs these

Yep, that's right! That is precisely why I asked in a previous note if anyone knew where/when and by whom the concept of the S-meter was started. I wonder also. Like it seems as tho' it was likely quite some time ago, when the equipment available had noise floors at -120dbm or so at best, instead of what we have today.

>days is < -135dBm (under the band noise). The thermal noise floor is
>only -148dBm in 500Hz at 298K.

And today, there exists many newer technology radios that already use the segment displays instead of the analog S-meter. I presume these segment displays are driven by the comparator type chips that accept an analog input and provide discreet outputs at some db step interval of the input. Now, all we'd need to add is something like Gary's or Kevin's suggested calibration mechanism to compensate for the gain variation and wa-la, we'd be pretty darn close, huh?

Paul
WB2OYC

ar..

Date: 26 Jul 1993 10:12 PST
From: sdd.hp.com!swrinde!cs.utexas.edu!math.ohio-state.edu!howland.reston.ans.net!
sol.ctr.columbia.edu!destroyer!cs.ubc.ca!unixg.ubc.ca!erich.triumf.ca!
bennett@network.ucsd.edu
Subject: Super Morse in Windows
To: info-hams@ucsd.edu

In article <9307231342.AA12674@NADC.NADC.NAVY.MIL>, skitch@NADC.NAVY.MIL (M.
Squicciarini) writes...
>I had problems running SM in windows also until I read the manual!!
>The souolution is in the documentation. It just a matter of defining
>an icon and using the sm.pif file.
>
>73 -- marty -- nr3z   skitch@nadc.navy.mil

And using the correct timing source - "timer" doesn't work, "loop" does.
(this is also in the manual)

Peter Bennett VE7CEI | Vessels shall be deemed to be in sight
Internet: bennett@erich.triumf.ca | of one another only when one can be
Bitnet: bennett@triumfer | observed visually from the other
TRIUMF, Vancouver, B.C., Canada | ColRegs 3(k)

Date: Wed, 28 Jul 1993 20:14:10 GMT
From: sdd.hp.com!hpscit.sc.hp.com!news.dtc.hp.com!srgenprp!alanb@decwrl.dec.com
Subject: TS50 Illegal!
To: info-hams@ucsd.edu

Gary Coffman (gary@ke4zv.uucp) wrote:
: In article <CAu6wA.I6@srgenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:

: >100% modulated AM has a 4/1 peak (PEP) to carrier power ratio.

: I hate to beat this to death, but I'm still unconvinced. My reference
: says differently. What's your reference for 4/1 for AM? ...
: Reference Data for Radio Engineers_
: says the PEP in VA of AM is 2.83 times carrier. I've been using that
: book for a lot of years, and I believe it's correct.

Bob McGwier (n4hy@tang.ccr-p.ida.org) wrote:

: I think I agree with Gary. The sidebands are in quadrature so they don't
: add. Your formula assumes they are in phase.

Sheesh, it's not like this is some personal theory of mine. It is well-known that the modulation peaks of a 100%-modulated AM signal are 6 dB above the carrier.

I've already given the clearest technical explanation I know, but if you prefer to refer to authority, I'll see if I can dig up some references:

I don't seem to have a recent ARRL Handbook here at work (I USED to -- I guess somebody "borrowed" it...), but in my 1977 edition in the "HF Transmitting" chapter, page 153, it says "The PEP output of any a-m signal is four times the carrier output power..." Again, on page 369 ("AM and DSP" chapter), it says "The amplitude values shown in Fig. 12-2 correspond to ... voltage. The power in the wave varies as the SQUARE of ... the voltage, so at the peak of the modulation upswing the instantaneous power in the envelope of Fig 12-2C [a 100% modulated AM signal] is four times the unmodulated carrier power..."

In my equally old (18th edition) of the _Radio Handbook_ edited by Bill Orr W6SAI of Eimac, in the chapter on "Amplitude Modulation" page 310, it says "Figure 1D illustrates the maximum obtainable distortionless modulation with a sine modulating wave, the r-f voltage at the peak of the r-f cycle varying from zero to twice the unmodulated value, and the r-f power varying from zero to four times the unmodulated value (the power varies as the square of the voltage)."

Gary evidently has an old copy of the _Reference_ book. It is now called _Referrence Data for Engineers_ and uses a different page numbering scheme. I couldn't find a reference to PEP AM power specifically, but on page 23-4 it gives the equation for an AM signal: e(t) = Ao [1 + m s(t)] cos (Wc t), where Ao is the amplitude, m s(t) is the modulation waveform (absolute value <= 1) and Wc is the carrier frequency. When m s(t) = +1 (peak of 100% modulation), the carrier (the cos (Wc t) part) is multiplied by 2, so it's twice the voltage or 4 times the power.

I'm amazed that anyone considers this a controversial issue.

AL N1AL

Date: Wed, 28 Jul 1993 20:37:09 GMT
From: csus.edu!news.ucdavis.edu!yogi.ucdavis.edu!szhall@decwrl.dec.com
Subject: Wanted Keyer with memory for CW-ham radio

To: info-hams@ucsd.edu

Date: Thu, 29 Jul 1993 00:06:03 GMT
From: europa.eng.gtefsd.com!howland.reston.ans.net!agate!news.ucdavis.edu!
bullwinkle.ucdavis.edu!szhall@uunet.uu.net
Subject: Wanted Keyer with memory for CW-ham radio
To: info-hams@ucsd.edu

Date: 28 Jul 1993 21:17:39 GMT
From: spool.mu.edu!howland.reston.ans.net!math.ohio-state.edu!news.acns.nwu.edu!
casbah.acns.nwu.edu!rdewan@decwrl.dec.com
To: info-hams@ucsd.edu

References <1993Jul27.172349.5003@uoft02.utoledo.edu>,
<23626e$o0p@news.acns.nwu.edu>, <236433$par@charm.magnus.acs.ohio-
state.edu>asbah.ac
Subject : Re: How many people actually use paddles ?

In article <236433$par@charm.magnus.acs.ohio-state.edu> ksampath@magnus.acs.ohio-
state.edu (Krishna S Sampath) writes:
>In article <23626e$o0p@news.acns.nwu.edu> rdewan@casbah.acns.nwu.edu (Rajiv
Dewan) writes:
>> ... stuff ...
>>
>> 3) Buy a new one: (here are the ones I have tried)
>>   Bencher: Widely used. Nice, light and fast. abt $65
>>   MFJ: Similar to Bencher, just a little cheesier. $45.
>>   Vibroplex Iambic Standard: heavy, slower than others, looks good $85
>>   Kent: My favorite. Very fast, precise and easy to adjust. $75
>>   Hi-Mound: Stiff, comes with plastic cover, slower than Kent. $85
>>
>>   There are others too. I am sure you will hear about them.
>>
>>Rajiv
>>aa9ch
>
>
>   does anyone use the "jones key"? some ads in qst list them around
> $140 (ouch!). i saw one at universal shortwave but did not get a
>   chance to play with it.....

>

I played with it for a bit at Dayton. IMHO, not in the same league
as Kent keys. Much less precise feel and slower.

Rajiv
aa9ch
Address: r-dewan@nwu.edu
Phone: None on HF. Only CW.
         Look for aa9ch/m on bottom end of 10m-80m.

Date: Wed, 28 Jul 93 23:34:37 GMT
From: ncrgw2.ncr.com!ncrhub2!torynews!kevin@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Jul28.085859@IASTATE.EDU>, <CAvvEw.7J@fc.hp.com>,
<CAw19r.3sD@news.iastate.edu>om
Subject : CW Prosigns (was: -.. ..- -- -...)

In article <CAw19r.3sD@news.iastate.edu> wjturner@iastate.edu (William J Turner)
writes:
>In article <CAvvEw.7J@fc.hp.com> jayk@fc.hp.com writes:
>>
>>Lots of ops finish a QSO with callsign then ...-.- ..
>
>True, but my point was that is technically incorrect, not that it doesn't
>happen. Besides, the ...-.- .. is actually . .. . or "shave and a
>haircut, two bits". I think someone did the SK at the end and someone else
>thought it was "Shave and a haircut" and it grew from their.

Interesting...how can one determine what is technically "correct" other than
by current usage? I hear a majority of folks sending SK at the end, so that
is what I do too. If I'm wrong, I'll change it, but how do I know?

>There are many procedural calls that are not used correctly. Many hams send
>SK last. Many always send K and never KN (not incorrect, though). And many
>send the K very long. Ie, ----- . -----

That's (the long K) just to wake up the operator at the other end after
giving him your life story. ;-)

OK, a question for all you procedural nuts: when is AR used?
I've heard it at the end of a CQ, i.e.,

     ...CQ DE AA6AA/M AA6AA/M AR

and also before doing an "over" to the other station, i.e.,

    ...AR AA6AA DE AB6BA KN

Which is correct? What does it *mean*? I use these and I really don't know what they mean, they seem to be Obligatory Punctuation.

--
[] [] [][]   [][]   Kevin Sanders, KN6FQ   NCR Torrey Pines
[] []   [] [] []   kevin.sanders@torreypinesca.ncr.com   (619) 597-3602
[][]   [][]   [][]   kevin%beacons@cyber.net
[] []   [] []   []
[] [] [] [] [][]   Dump MS-DOS.   Prevent Programmer Burnout with Linux.

End of Info-Hams Digest V93 #917
****